



Attorney Docket: 3743/49008  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**RECEIVED**

Applicant: LORENZ POELLINGER ET AL. OCT 11 2002  
Serial No.: 09/922,958 Group Art Unit: 1645 TECH CENTER 1600/2900  
Filed: AUGUST 7, 2001 Examiner: To Be Assigned  
Title: MECHANISM OF CONDITIONAL REGULATION OF THE  
HYPOXIA-INDUCIBLE FACTOR-1 BY THE VON HIPPEL-  
LINDAU TUMOR SUPPRESSOR PROTEIN

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§ 1.97 and 1.98**

Commissioner for Patents  
Washington, D.C. 20231

Sir:


In accordance with the duty of disclosure under 37 CFR §1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached Form PTO-1449 and/or listed herein and which the Examiner may deem relevant to patentability of the claims of the above-identified application.

The present Information Disclosure Statement is being filed before the mailing date of the first Office Action on the merits, therefore, no certification under 37 C.F.R. §1.97(e) or fee under 37 C.F.R. §1.17(p) is required.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be

appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

Respectfully submitted,

  
\_\_\_\_\_  
J. D. Evans  
Registration No. 26,269

CROWELL & MORING, LLP  
P.O. Box 14300  
Washington, DC 20044-4300  
Telephone No.: (202) 624-2500  
Facsimile No.: (202) 628-8844

FORM PTO-1449 U.S. Department of Commerce  
Patent & Trademark Office

Attorney Docket No.  
3743/49008

Serial No.  
09/922,958

Applicant: Lorenz POELLINGER, et al.

Filing Date  
August 7, 2001

Group  
1645

**INFORMATION DISCLOSURE STATEMENT**  
(Use several sheets if necessary)

### U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Sub-Class	Filing Date
	AA	2002/0120948	08/29/2002	Fisher			
	AB	5882914	03/16/1999	Semenza			
	AC	6020462	02/01/2000	Semenza			
	AD	6124131	09/26/2000	Semenza			
	AE	6222018	04/24/2001	Semenza			
	AF	6432927	08/13/2002	Gregory, et al.			
	AG	6436654	08/20/2002	Berkenstam, et al.			
	AH	2002/0061294	05/23/2002	Lewis, et al.			
	AI	6455674	09/24/2002	Einat, et al.			
	AJ	2002/0103353	08/01/2002	Einat, et al.			

### FOREIGN PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Sub-Class	TRANSLATION	
							Yes	No
	AK	WO 02/068466	09/06/2002	White, et al.				
	AL	WO 02/12326	02/14/2002	Poellinger, et al.				
	AM	WO 00/29437	05/25/2000	Berkenstam, et al.				
	AN	WO 00/69908	11/23/2000	Ratcliffe, et al.				
	AO	WO 96/39426	12/12/1996	Semenza				

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

AP	Patrick MAXWELL, et al., "The tumour suppressor protein VHL targets hypoxia-inducible factors for oxygen-dependent proteolysis" Nature, Vol. 399, No. 6733, May 20, 1999, pages 271-275							
AQ	Christopher PUGH, et al., "Activation of Hypoxia-inducible Factor-1; Definition of Regulatory Domains within the Alpha Subunit" Journal of Biological Chemistry, Vol. 272, No. 17, April 25, 1997, pages 11205-11214							
AR	Vickram SRINIVAS, et al., "Characterization of an Oxygen/Redox-Dependent Degradation Domain of Hypoxia-Inducible Factor Alpha (HIF-alpha) Proteins" Biochemical and Biophysical Research Communications, Vol. 260, No. 2, July 5, 1999, pages 557-561							
AS	Carrie Hayes SUTTER, et al., "Hypoxia-inducible factor 1-alpha protein expression is controlled by oxygen-regulated ubiquitination that is disrupted by deletions and missense mutations" Proceedings of the National Academy of Sciences of the United States, Vol. 97, No. 9, April 25, 2000, pages 4748-4753							
AT	Database EMBL Online, N. V. IYER, et al., "The human hypoxia-inducible factor 1 alpha gene: HIF1A structure and evolutionary conservation" Acc No. Q9UPB1, May 13, 2000							

### EXAMINER

### DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 U.S. Department of Commerce Patent & Trademark Office	Attorney Docket No. 3743/49008	Serial No. 09/922,958
	Applicant: Lorenza POELLINGER, et al.	
	Filing Date August 7, 2001	Group 1645

**INFORMATION DISCLOSURE STATEMENT**  
(Use several sheets if necessary)

U.S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Sub-Class	Filing Date (if appropriate)
	AU						
	AV						

FOREIGN PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Sub-Class	TRANSLATION
	AW						Yes No
	AX						

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
	AY	Mircea IVAN, et al., "HIFalpha Targeted for VHL-Mediated Destruction by Proline Hydroxylation: Implications for O <sub>2</sub> Sensing" Science, Vol. 292, No. 5516, April 20, 2001, pages 464-468					
	AZ	Bing-Hua JIANG, et al., "Transactivation and Inhibitory Domains of Hypoxia-inducible Factor 1alpha" Journal of Biological Chemistry, Vol. 272, No. 31, August 1, 1997, pages 19253-19260					
	BA	L. Eric HUANG, et al., "Activation of Hypoxia-inducible Transcription Factor Depends Primarily upon Redox-sensitive Stabilization of Its alpha Subunit" Journal of Biological Chemistry, Vol. 273, No. 50, December 13, 1996, pages 32253-32259					
	BB	Pekka KALLIO, et al., "Signal transduction in hypoxic cells: inducible nuclear translocation and recruitment of the CBP/p300 coactivator by the hypoxia-inducible factor-1 alpha" EMBO Journal, Vol. 17, No. 22, 1998, pages 6573-6886					
	BC	Guang WANG, et al., "Hypoxia-inducible factor 1 is a basic-helix-loop-helix-PAS heterodimer regulated by cellular O <sub>2</sub> tension" Proc. Natl. Acad. Sci. USA, Vol. 92, June 1995, pages 5510-5514					
	BD	Andrew EPSTEIN, et al., "C. elegans EGL-9 and Mammalian Homologs Define a Family of Dioxygenases that Regulate HIF by Prolyl Hydroxylation" Cell, Vol. 107, October 5, 2001, pages 43-54					
	BE	Martin TAYLOR, "Characterization and comparative analysis of the EGLN gene family" Gene, Vol. 275, 2001, pages 125-132					
	BF	Keiji TANIMOTO, et al., "Mechanism of regulation of the hypoxia-inducible factor-1 alpha by the von Hippel-Lindau tumor suppressor protein" European Molecular Biology Organization Journal, Vol. 19, No. 16, August 15, 2000, pages 4298-4309					
	BG	Masatsugu EMA, et al., "Molecular Mechanisms of Transcription Activation by HLF and HIF1 alpha in Response to Hypoxia: their Stabilization and Redox Signal-Induced Interaction with CBP/p300" The EMBO Journal, Vol. 18, No. 7, 1999, pages 1905-1914					

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.	